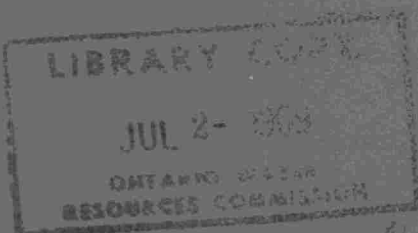


PARRY SOUND

**water pollution
control plant**

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ONTARIO WATER RESOURCES COMMISSION

Division of Plant Operations

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ONTARIO WATER RESOURCES COMMISSION

801 BAY STREET, TORONTO 5

OFFICE OF THE GENERAL MANAGER

Members of the Parry Sound Local Advisory Committee,
Town of Parry Sound.

Gentlemen:

We are happy to present you with the 1967 Operating Summary for the
Parry Sound Water Pollution Control Plant, OWRC Project No. 2-0113-62.

Your co-operation with our staff throughout the year has been appreciated.
Only with such co-operation can the war against water pollution be waged
effectively.

Yours very truly,

A handwritten signature in dark ink, appearing to read "D. S. Caverly".

D. S. Caverly,
General Manager.

LIBRARY COPY

JUL 2- 1969

ONTARIO WATER
RESOURCES COMMISSION

#1



ONTARIO WATER RESOURCES COMMISSION

801 BAY STREET
TORONTO 5

J. A. VANCE, LL.D.
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J. H. H. ROOT, M.P.P.
VICE-CHAIRMAN

D. S. CAVERLY
GENERAL MANAGER

W. S. MACDONNELL
COMMISSION SECRETARY

General Manager,
Ontario Water Resources Commission.

Dear Sir:

I am pleased to submit to you the 1967 Operating Summary for the Parry Sound Water Pollution Control Plant, OWRC Project No. 2-0113-62.

The summary reviews progress during the year, outlines operating problems encountered and summarizes in graphs, charts and tables all significant flow and cost data.

Yours very truly,

A handwritten signature in dark ink, appearing to read "D. A. McTavish".

D. A. McTavish, P. Eng.,
Director,
Division of Plant Operations.

FOREWORD

● This operating summary has been prepared in order to acquaint readers with the management of the project during 1967. The efficiency of the plant's operation is reflected in a general review. Significant financial details are recorded, and technical performance is illustrated by graphs and charts.

The summary should answer two salient questions. Are the project's facilities adequate at this time? And can the project meet future requirements?

The Regional Operations Engineer is primarily responsible for the preparation of the report, and will be pleased to answer any questions regarding it.

Most of the material for the graphs and charts was compiled by the statistics section of the Division of Plant Operations, with the final versions of the graphs being drawn by the draughting section of the Division of Sanitary Engineering. Cost data were provided by the Division of Finance.

It will be evident from the report that all of these groups co-operated with substantial success.

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PARRY SOUND
water pollution control plant

operated for

THE TOWN OF PARRY SOUND

by the

ONTARIO WATER RESOURCES COMMISSION

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DIVISION OF PLANT OPERATIONS

DIRECTOR: D. A. McTavish

Assistant Director: C. W. Perry
Regional Supervisor: P. J. Osmond
Operations Engineer: R. Kauppinen

801 Bay Street Toronto 5

'67 REVIEW

The total operating cost for the project was \$29,843.67 in 1967, representing a cost of \$127.35 per million gallons treated.

A total of 234.338 million gallons was treated at an average daily flow of 690,000 gallons.

The influent had an average strength of 104 ppm BOD and 145 ppm suspended solids; the effluent had an average strength of 52 ppm BOD and 32 ppm suspended solids for a removal efficiency of 47.9 percent and 77.6 percent for BOD and suspended solids respectively.

Chlorination of the final effluent was carried out through the whole year and odour control chemicals were used at McCurry Creek. These measures were taken because of the condition of the receiving waters.

Some problems were experienced with some of the equipment in the pumping stations. The supplier has been contacted for solutions to these problems.

PROJECT COSTS

NET CAPITAL COST (Estimated)	\$839,542.86
DEDUCT - Portion Financed by CMHC (Estimated)	<u>549,696.21</u>
Long Term Debt to OWRC	<u>\$289,846.65</u>
Debt Retirement Balance at Credit (Sinking Fund) December 31, 1967	\$ <u>14,580.01</u>
Net Operating	\$ 29,843.67
Debt Retirement	5,778.00
Reserve	5,102.92
Interest Charged	15,799.32
	<hr/>
TOTAL	\$ <u>56,523.91</u>

RESERVE ACCOUNT

Balance at January 1, 1967	\$ 6,797.23
Deposited by Municipality	5,102.92
Interest Earned	<u>499.33</u>
	\$ 12,399.48
Less Expenditures	<hr/>
Balance at December 31, 1967	\$ <u>12,399.48</u>

MONTHLY OPERATING COSTS

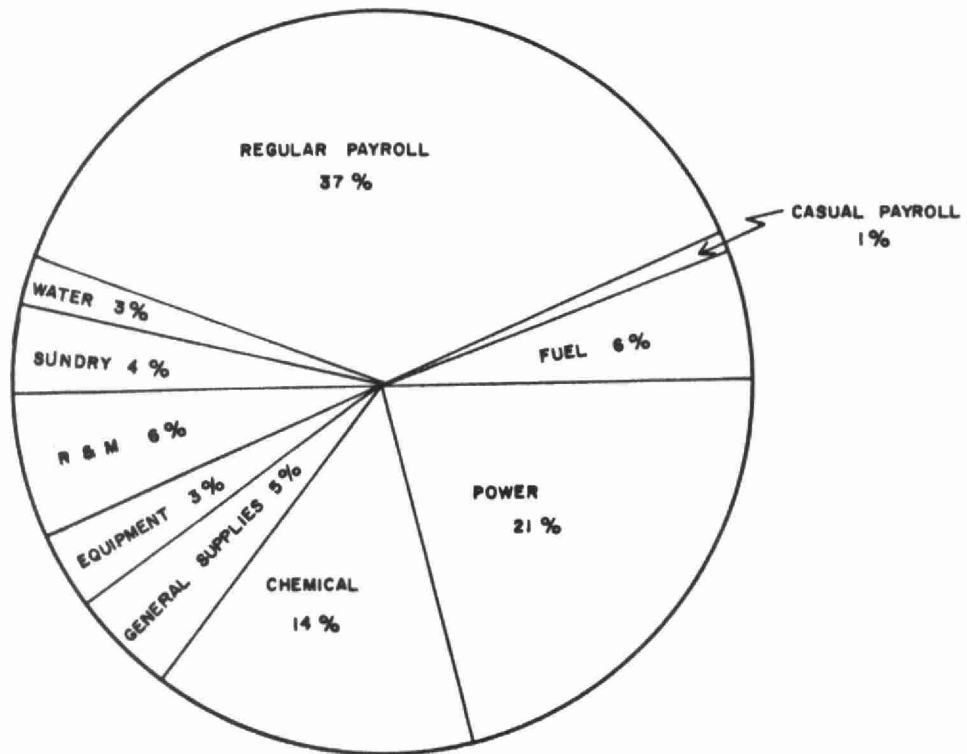
MONTH	TOTAL EXPENDITURE	PAYROLL	CASUAL PAYROLL	FUEL	POWER	CHEMICAL	GENERAL SUPPLIES	EQUIPMENT	REPAIRS & MAINTENANCE	SUNDRY	WATER
JAN	858.62	778.16								80.40	
FEB	2161.84	773.50		228.00	550.45	456.75	53.85			13.97	85.32
MARCH	2846.59	1351.88		228.00	532.74		165.69	212.78	151.30	52.64	151.56
APRIL	2044.64	826.16		228.08	480.17	456.75	35.03			(.45)	18.90
MAY	2638.06	870.26		228.00	677.56	340.20	159.84	9.47	313.15	34.18	5.40
JUNE	2604.56	990.15			434.55	456.75	83.47	470.50		130.62	38.52
JULY	2530.66	798.06		240.17	574.60	340.20	74.57		214.69	195.85	92.52
AUG	2028.20	1011.53			571.00		129.81	195.44	29.88	13.50	77.04
SEPT	2574.54	1217.33	184.88		502.06	340.20	113.24		61.63	13.76	91.44
OCT	3408.97	798.06		240.00	533.02	913.50	166.07	90.19	581.10	21.87	65.16
NOV	2717.24	884.69			544.16	456.75	69.33	35.27	212.83	447.79	66.42
DEC	3429.75	854.35		240.00	963.76	456.75	306.10		330.42	196.57	82.80
TOTAL	29843.67	11154.13	184.88	1632.25	6364.07	4217.85	1406.00	1013.65	1895.00	1200.76	775.08

BRACKETS INDICATE CREDIT

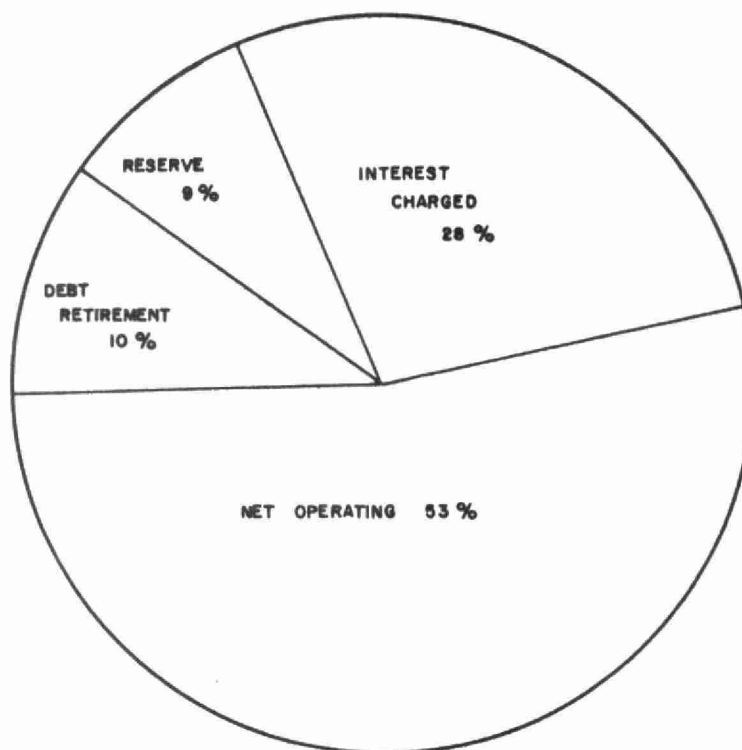
YEARLY OPERATING COSTS

YEAR	M. G. TREATED	TOTAL COST	COST PER MILLION GALLONS	COST PER LB OF BOD REMOVED
1966	231,646	\$25,281.98	\$109.14	23 CENTS
1967	234,338	\$29,843.67	\$127.35	24 CENTS

1967 OPERATING COSTS



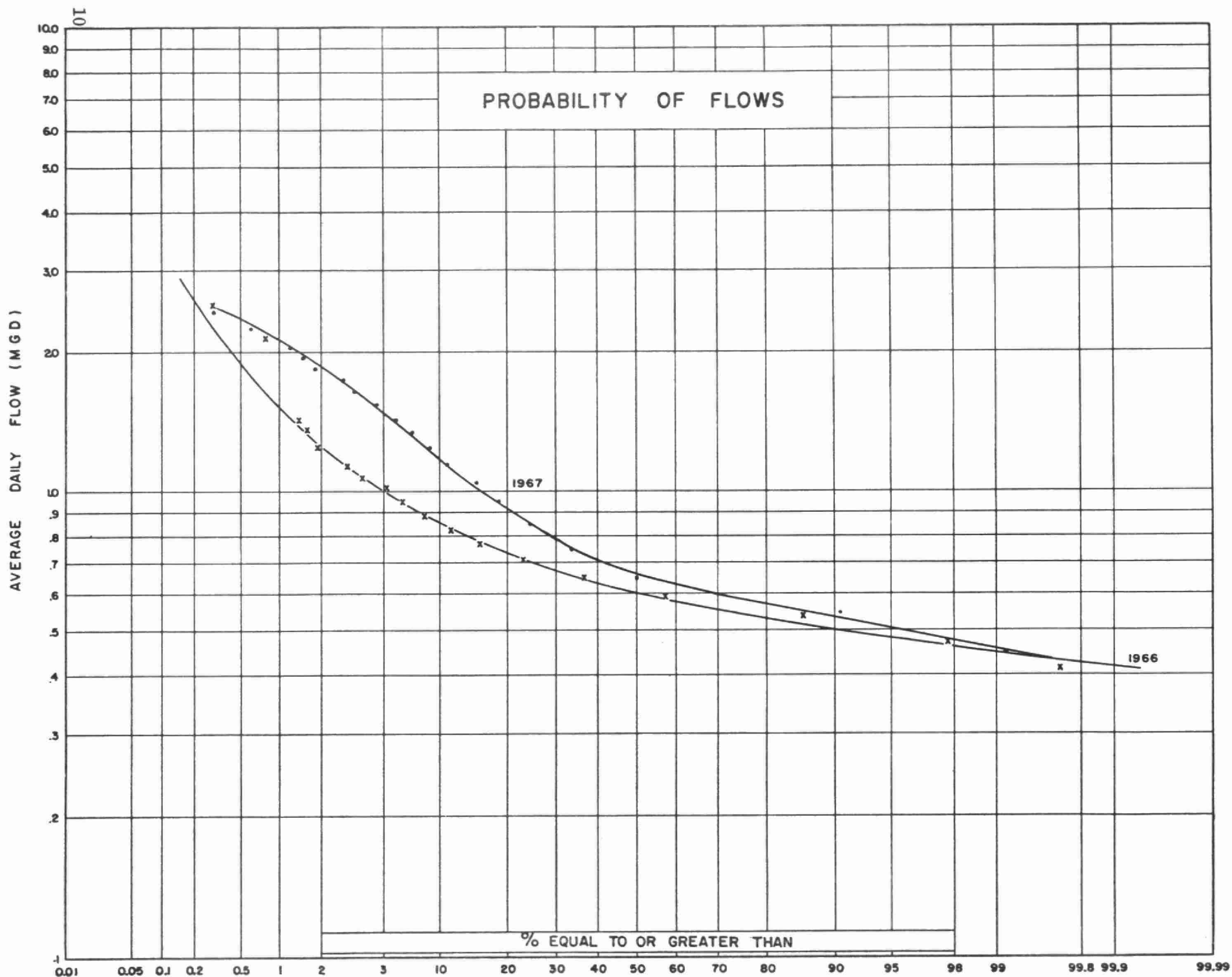
TOTAL ANNUAL COST

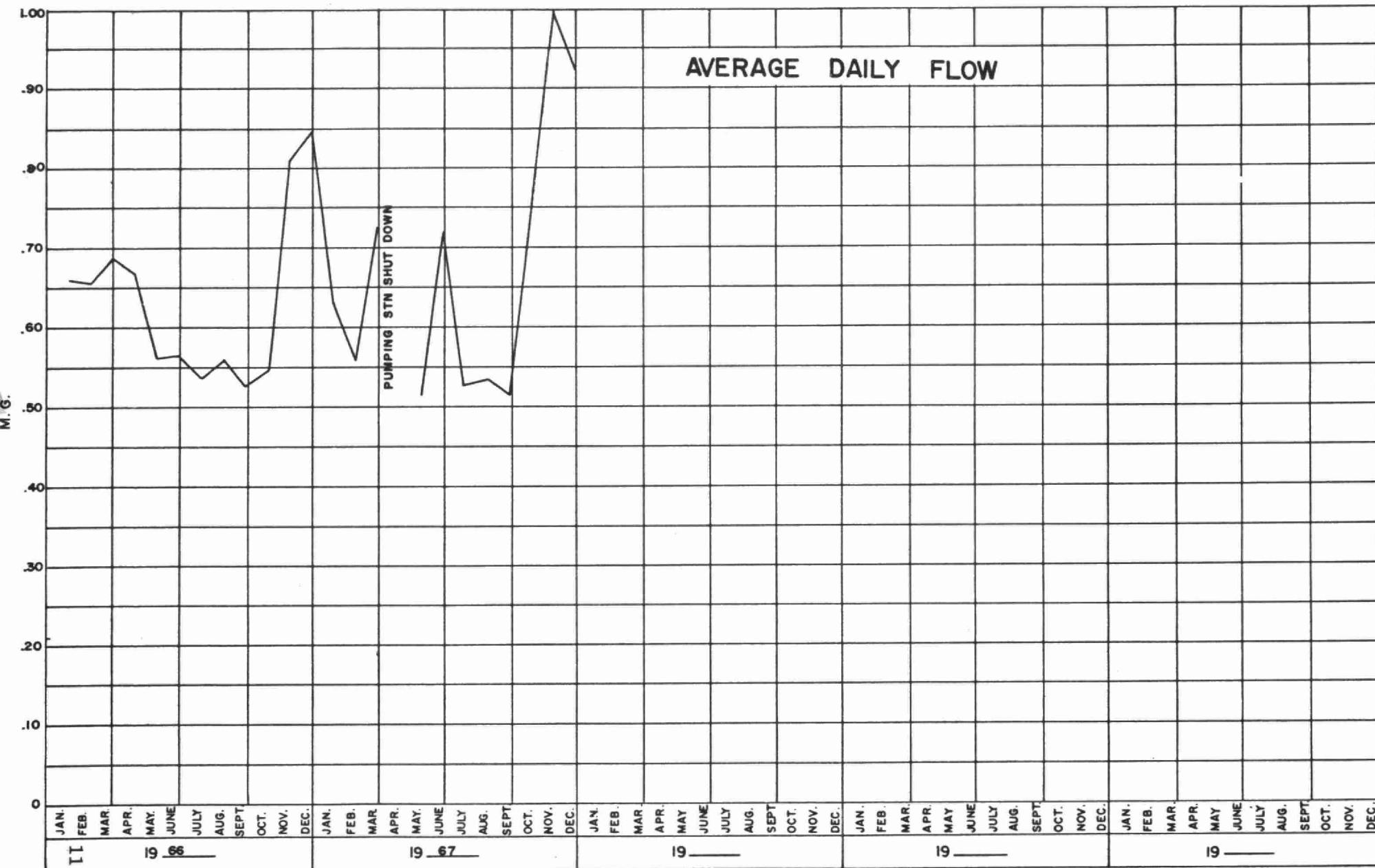


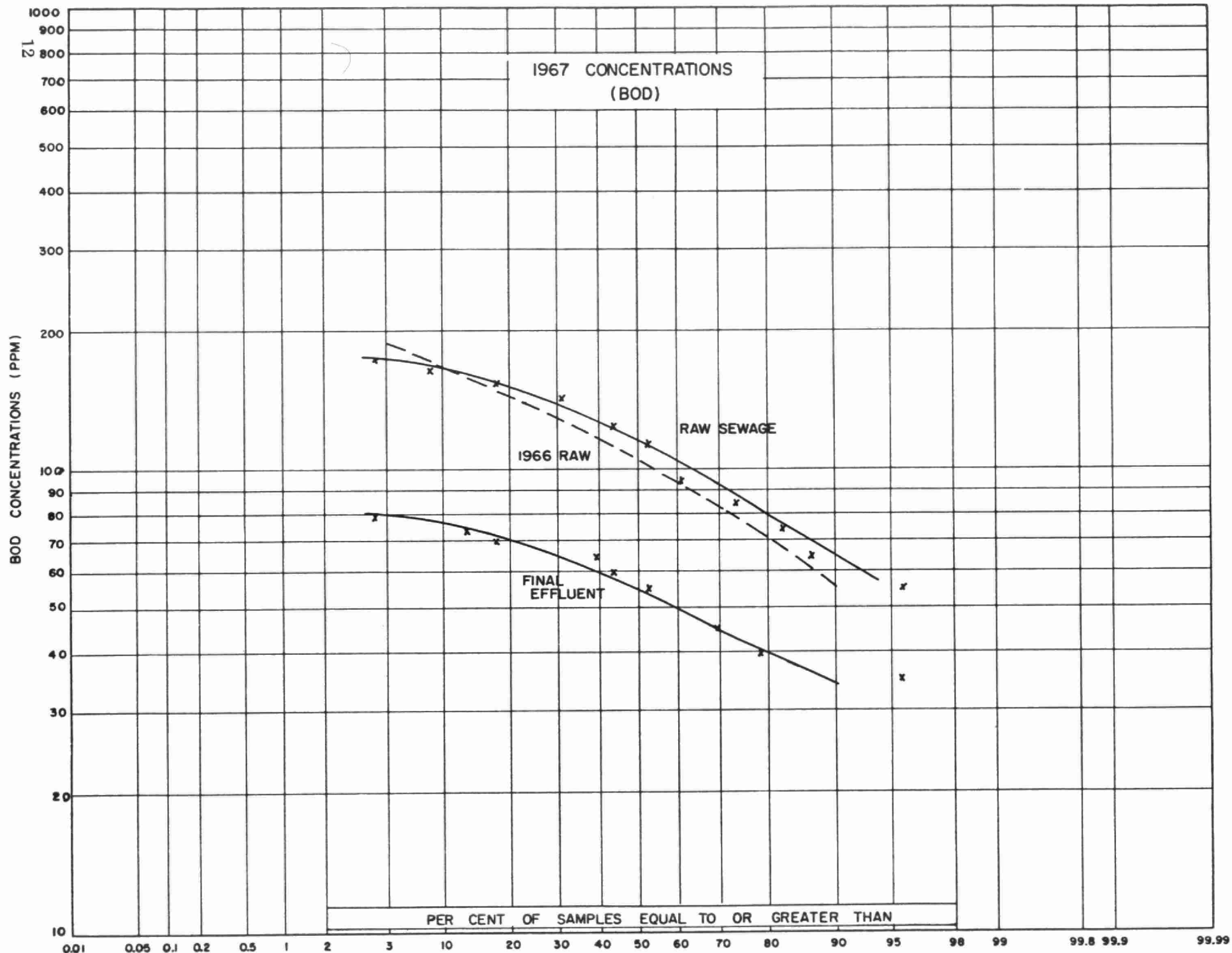
Process Data

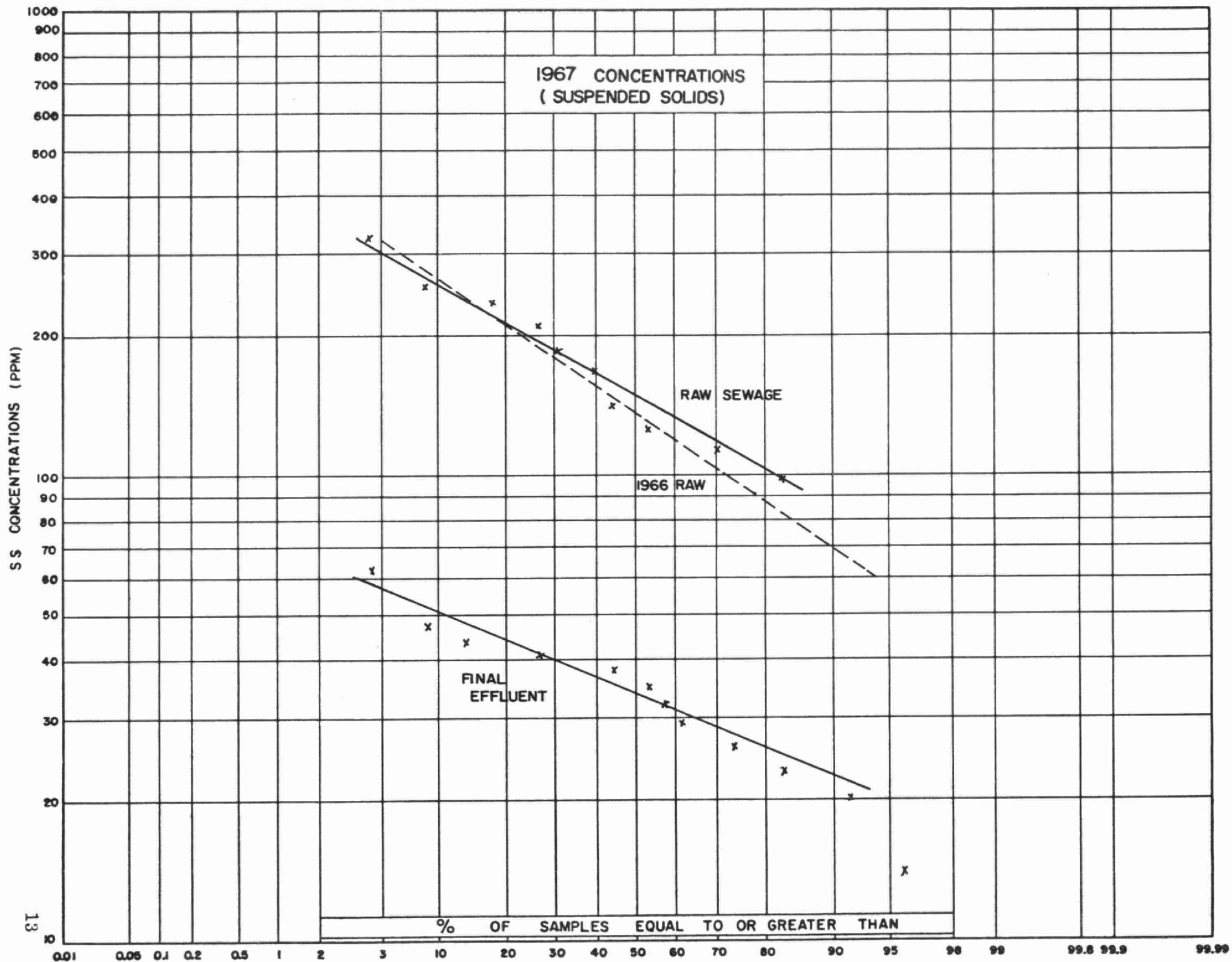
A total of 234.338 million gallons was treated in 1967. The average daily flow was approximately 690,000 gallons compared to 635,000 gallons in 1966, which represents an increase of approximately 8.7 percent.

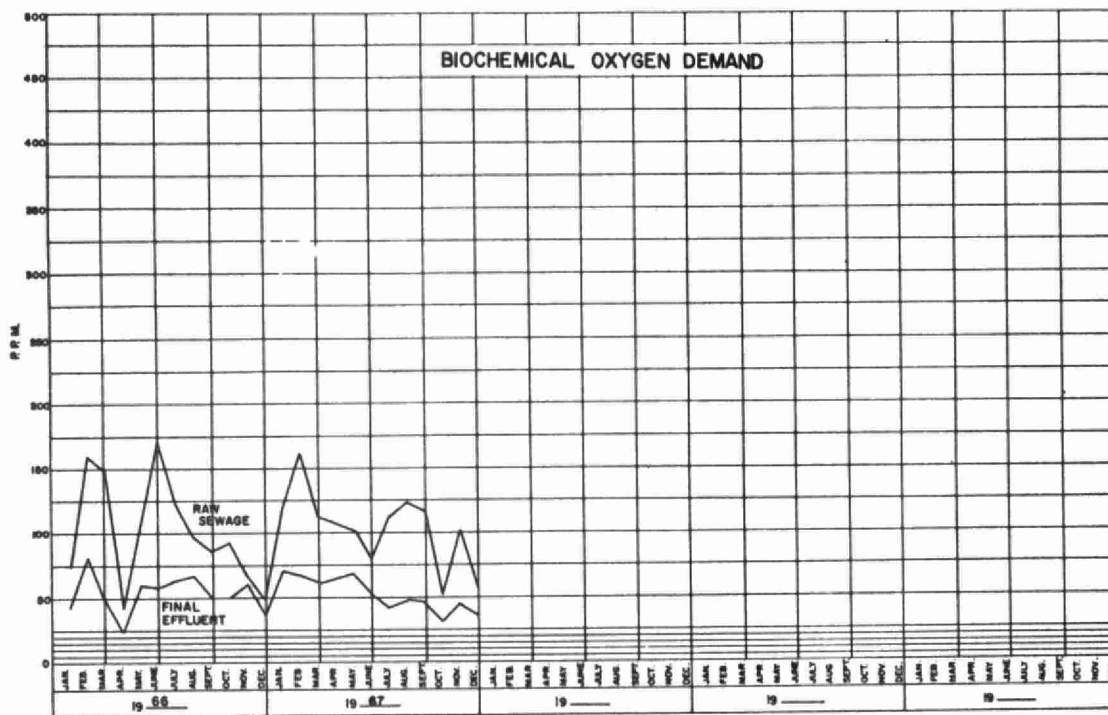
The daily flow exceeded the average design plant flow of 830,000 gallons per day approximately 26 percent of the time. However, the plant has a maximum design plant flow capacity of 2.5 mgd.



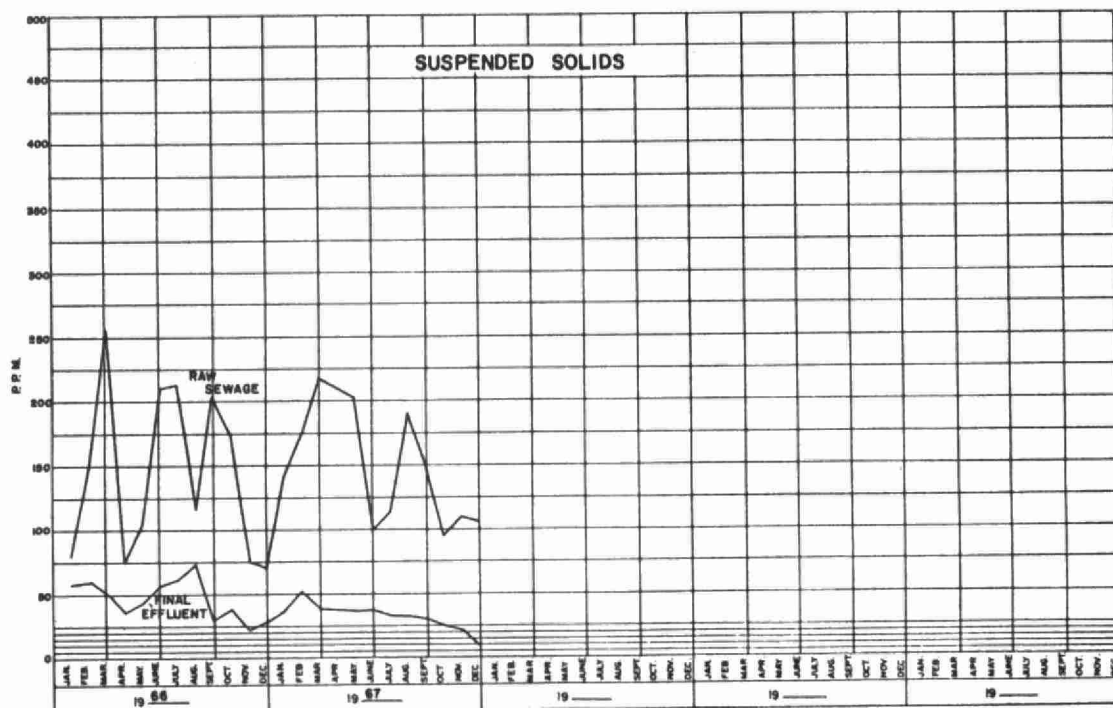








MONTHLY VARIATIONS



GRIT, B.O.D AND S. S. REMOVAL

MONTH	B. O. D.				S. S.				GRIT REMOVAL CU. FT.
	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	INFLUENT PPM.	EFFLUENT PPM.	% REDUCTION	TONS REMOVED	
JAN.	122	72	41.0	4.89	141	36	74.5	10.28	37
FEB.	164	67	59.1	7.60	174	51	70.7	9.63	27
MAR.	113	63	44.2	5.58	218	38	82.6	20.11	157
APR.	*104	67	47.9	1.72	*145	32	77.6	5.24	200
MAY	104	67	35.6	2.95	204	36	82.3	13.40	8
JUNE	80	54	32.5	2.76	99	36	63.6	6.69	416
JULY	111	42	62.2	5.63	114	33	71.0	6.61	161
AUG.	123	48	61.0	6.24	192	32	83.3	13.32	269
SEPT.	117	47	59.8	5.44	152	30	80.3	9.48	109
OCT.	51	32	37.3	2.17	95	25	73.7	7.99	159
NOV.	101	45	55.4	8.44	109	21	80.7	13.26	147
DEC.	59	36	39.0	3.31	106	9	91.5	13.95	53
TOTAL	-	-	-	60.92	-	-	-	132.40	1743
AVG.	104	52	47.9	5.54	145	32	77.6	12.04	145

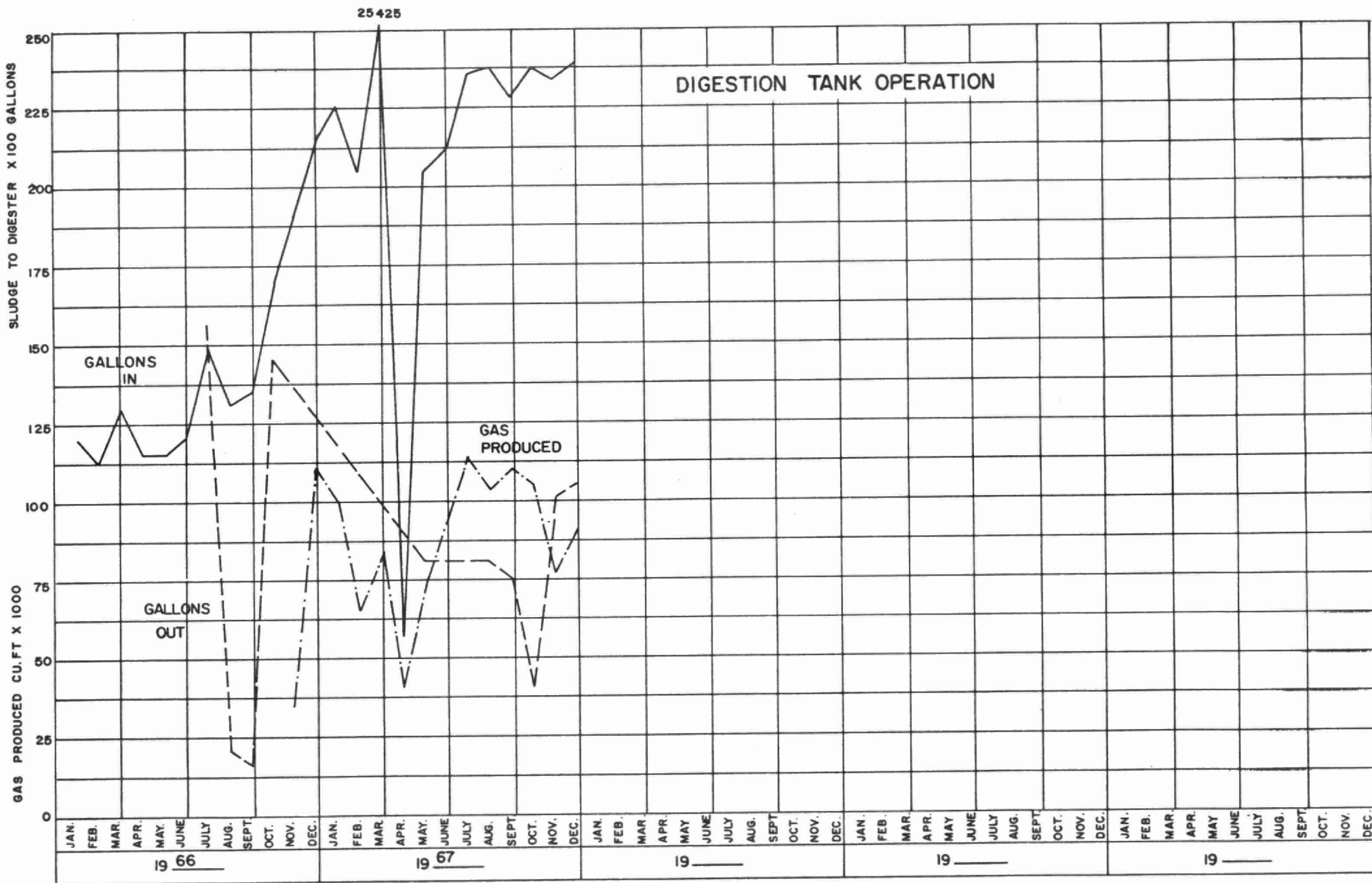
* Pumping station shut down; average sample values used.

COMMENTS

The average influent BOD was 104 ppm and the suspended solids concentration was 145 ppm for the year. The average final effluent BOD was 52 ppm and the suspended solids concentration was 32 ppm.

The removal efficiency for the year was 47.9 percent and 77.6 percent for BOD and suspended solids respectively.

A total of 1743 cubic feet of grit was removed at the plant for an average of 7.5 cubic feet per million gallons treated.



DIGESTER OPERATION

MONTH	SLUDGE TO DIGESTERS			SLUDGE FROM DIGESTERS			GAS PRODUCED 1000'S Cu. Ft.
	GALLONS	% SOLIDS	% VOL. MAT.	GALLONS	% SOLIDS	% VOL. MAT.	
JAN.	22665	3.51	73.79	-	-	-	98.941
FEB.	20430	3.71	75.47	-	-	-	64.438
MAR.	25425	3.85	64.41	-	-	-	82.824
APR.	5730	-	-	-	-	-	40.545
MAY	20400	5.02	62.44	8000	-	-	72.343
JUNE	21150	4.61	59.20	-	-	-	92.122
JULY	23650	4.34	65.44	-	-	-	113.187
AUG.	23825	-	-	8000	-	-	103.153
SEPT.	22800	3.79	65.18	7500	-	-	109.316
OCT.	23800	-	-	4000	-	-	104.145
NOV.	23475	2.21	-	10000	-	-	76.300
DEC.	23900	6.06	66.32	10500	-	-	89.950
TOTAL	257250	-	-	48000	-	-	1047.264
AVG.	21438	4.12	66.53	8000	-	-	87.272

*P. S. Shut down

COMMENTS

A total of 257,250 gallons of raw sludge was pumped to the digester and a total of 48,000 gallons of digested sludge was removed from the digester.

CHLORINATION

MONTH	PLANT FLOW (MG)	POUNDS CHLORINE	DOSAGE RATE (PPM)
JANUARY	19.580	1923	9.82
FEBRUARY	15.665	1785	11.39
MARCH	22.342	1997	8.93
APRIL	*9.279	361	3.89
MAY	**15.953	1765	11.06
JUNE	21.246	1881	8.85
JULY	16.330	1920	11.76
AUGUST	16.653	1838	11.03
SEPTEMBER	15.540	1416	9.11
OCTOBER	22.841	1779	7.79
NOVEMBER	30.145	1844	6.11
DECEMBER	28.764	1955	6.80
TOTAL	234.338	20464	-
AVERAGE	21.200	1705	8.88

* Data for 7 days

** Data for 28 days

COMMENTS

A policy of year round chlorination was commenced in March 1966 because of the conditions of the receiving waters in McCurry Lake and McCurry Creek. A total of 20,464 pounds of chlorine was used for an average dosage of 8.88 ppm of the final effluent.

LABORATORY LIBRARY



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CONCLUSIONS

The project was well operated and maintained by the staff. The plant provided satisfactory primary treatment. The receiving waters were not able to assimilate the effluent adequately.

RECOMMENDATIONS

It is recommended that secondary treatment facilities be provided.

A programme of storm water separation should be continued.

